

A REVIEW OF THE VETERINARY RESOURCES FOR AFGHANISTAN:
FUNDAMENTAL INFORMATION FOR THE PRIVATE VETERINARY TECHNICIAN
(PVT) PROGRAM PROPOSED BY MERCY CORPS INTERNATIONAL

A DRAFT SUBMITTED TO THE OFFICE OF THE USAID REPRESENTATIVE
FOR AFGHANISTAN

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PREFACE

This report addresses the requirements of two groups, the Office of the USAID Representative for Afghanistan (O/USAID/REP) and Mercy Corps International (MCI) with Tufts University School of Veterinary Medicine (TUSVM). These groups are cooperating to develop a training program for Private Veterinary Technicians (PVT's) in Southwest Afghanistan. For the first group, the O/USAID/REP in Islamabad, Pakistan, this report recounts my activities in Pakistan as I collated the available information pertaining to veterinary programs directed at serving Afghanistan. In brief these activities included:

1. reviewing the veterinary programs offered by several nongovernmental organizations (NGO's)
2. interviewing potential participants for the program initiated by MCI/TUSVM
3. surveying the teaching resources available for a training program in Quetta
4. contributing to the design of the training program.

The findings and recommendations of this report will be presented to the MCI/TUSVM group for evaluation and implementation.

POINTS TO PONDER

1. The information contained in this report intends to lay the groundwork for Dr. David Sherman who will be the technical director of the veterinary program at MCI. The intent is to inform Dr. Sherman of the veterinary resources available in Pakistan and Afghanistan.
2. The report reviews the activities of all of the NGO's involved with major veterinary projects for Afghanistan.
3. Some NGO's with smaller veterinary programs are also considered.
4. Interviews with the current veterinary staff at MCI are summarized.
5. Interviews with applicants for veterinary positions at MCI are included with recommendations regarding their suitability.
6. Many details such as the specifics of the actual contents of the PVT kits are not addressed. Similarly, many particulars of the actual course content are not included. These details demand collaboration with Dr. Sherman will who make the ultimate decisions regarding these matters.
7. Important directions which are not covered in this report include means of establishing a private sector veterinary medical supply, details on monitoring the program, and a pricing policy for the sale of supplies and services.
8. The report stresses the importance of establishing a cooperative veterinary community in Quetta to improve the success of the PVT program and other veterinary programs directed at Afghanistan.
9. Any expansion of the veterinary program at MCI will require the presence of a person dedicated to the program. The delays in Dr. Sherman's travel documents seriously hampers the timely progress of this program.
10. Monitoring paravets and PVT's through more extensive reports

from the field and with frequent refresher courses should be developed. Some of the refresher courses could be held in the field for a few days rather than having the paravets return to Quetta for instruction.

12. The course for the training of the trainers should emphasize differential diagnosis rather than the didactic approaches currently offered in the paravet courses. Furthermore, this course should reiterate the importance of the teaching role of the trainers.

A Brief Review of My Activities in Pakistan

Tue. Oct. 8	Depart Boston for New York and London
Wed. Oct. 9	Depart London for Karachi
Thu. Oct.10	Depart Karachi for Quetta, meet with Myron for introduction to MCI personnel and programs
Fri. Oct.11	Read veterinary material accumulated at MCI Met informally with Myron at Hash and party where I met with Andrew J. of EIL and Ed of RONCO
Sat. Oct.12	First day of curfew starts at 2 PM. Reviewed literature.
Sun. Oct.13	Curfew in effect for entire day. Began to catalogue ACBAR meetings.
Mon. Oct.14	Curfew off from 9 to 12 Interviewed applicant for translator
Tue. Oct.15	Curfew off from 9 to 1 Interviewed applicant for translator, Abdul Karim Interviewed applicant for ag. engineer
Wed. Oct.16	Curfew off from 7 to 2:30 Met with John Woodford at UNDP Interviewed Ramatullah, MCI ag. coordinator
Thu. Oct.17	Curfew off from 7:00 AM to 3:00 PM Inspected MCI warehouse Interviewed MCI pharmacist and storekeeper Contacted Peter at Health Unlimited in Quetta Interviewed Abdul Wali applying for translator Interviewed Fateh-mahammed, MCI veterinarian Contacted EIL, will arrange a meeting for next week
Fri. Oct.18	Curfew off from Noon to 3:00 PM ACBAR files entered
Sat. Oct.19	Curfew off from 7:00 AM to 5:00 PM Entered last weeks findings
Sun. Oct.20	Curfew off from 6:00 AM to 6:00 PM SWABAC agriculture meeting Interview paravets working for MCI
Mon. Oct.21	UNDP Veterinary Coordination Committee meeting UNDP deworming program with Afghai. paravets Interviewed two experienced paravets Interviewed one new paravet from EIL Discussed with Myron overall vet plan Visit GTZ in Quetta with John Woodford at 2 PM
Tue. Oct.22	Interview vaccinators working for MCI
Wed. Oct.23	Depart for Islamabad
Thu. Oct.24	Meet with USAID Fred Smith, Gary Lewis, Myron Jespersen Tickets for Northern Areas
Fri. Oct.25	Depart for Skardu
Sat. Oct.26	Depart Skardu for Gilgit
Sun. Oct.27	Visit AKRSP in Gilgit
Mon. Oct.28	Gilgit to Peshawar

Tue. Oct.29 ACBAR visit
 DCA visit
 Wed. Oct.30 GAF visit
 SCA visit
 MADERA visit
 Thr. Oct.31 Peshawar to Islamabad
 Passport hassle
 work in o/AID/rep

 Fri. Nov. 1 o/AID/rep
 Sat. Nov. 2 o/AID/rep
 Sun. Nov. 3 Passport hassle
 Islamabad to Quetta
 Mon. Nov. 4 Itineraries for Al's trip
 diarrhea
 Tue. Nov. 5 Talked with John Woodford by phone
 Interviewed two applicants for paravet
 Din Mohammed and Saed Assadullah
 Wed. Nov. 6 Interviewed 4 applicants for paravet
 Noor Ali, Mohd.Naem : both would be good choices
 for training program
 Mohd Nabi,s/o Shir Ali
 Sharaf ulDin s/o Abdul Habib (vaccinator?)
 also interviewed Khan Mohd, vaccinator who worked
 with Matthijs Toot on canal project
 Thr. Nov. 7 Interviewed Dr. Abdul Ahmed, Russian trained vet
 recommend that MCI hire him
 MCI medical graduation
 Fri. Nov. 8 Al arrives Karachi
 Sat. Nov. 9 Al arrives Quetta
 Sun. Nov.10 Prepare report
 Mon. Nov.11 Myron and I meet with John Woodford at 2 PM
 Meet with Andrew J. at EIL at 10 AM
 Tue. Nov.12 Finish Draft of report for USAID
 Wed. Nov.13 Second trip to Islamabad
 Thu. Nov.14 Islamabad with USAID
 Fri. Nov.15 Revise report for Tufts and USAID
 Sat. Nov.16
 Sun. Nov.17 Depart Quetta for Karachi
 Mon. Nov.18 Depart Karachi for Frankfort and London
 Tue. Nov.19 Depart London for Boston

Things to do:
 meet with EIL
 meet with SCF
 review vaccination activities of MCI
 meet with DAI

INTRODUCTION

The following narrative summarizes the activities of the training consultant who visited Pakistan from October 10, 1991 to November 17, 1991. The consultant undertook this on-site evaluation as one part of the collaborative effort between Mercy Corps International (MCI) and the Tufts University School of Veterinary Medicine (TUSVM) to develop a sustainable program of expanded veterinary service to southwest Afghanistan. This program is underwritten by the Office of the USAID Representative for Afghanistan (O/AID/REP). Accordingly, the O/AID/REP supported the activities of the training consultant.

The mandate of the training consultant was to lay the groundwork for a two-stage training program to be conducted by the veterinary staff of MCI and TUSVM over the next three years. This report introduces the major issues and findings pertinent to pursuing a new training program. The information contained in this report is derived from previous reports on the status of the livestock conditions in Afghanistan, interviews with agencies involved with providing veterinary service to Afghanistan and Pakistan, and interviews with the veterinary and agriculture staff at MCI. In addition to compiling information from previous investigations and programs, the consultant interviewed candidates for several positions in the PVT program, including translators, paraveterinarians, potential trainers, veterinarians, and vaccinators.

BACKGROUND

The need for veterinary services in Afghanistan has been recognized by relief agencies for a number of years. The first report of the Swedish Committee for Afghanistan (SCA), written in May, 1988, served as the pivotal document that focused attention on the decline in veterinary support for the organizations that had shown an interest in offering relief to the war-torn country. Since the release of its first report, the SCA has issued several other reports dealing with agriculture and with livestock, in particular. These reports assessed the depletion in the livestock

population since the incursion of foreign troops into Afghanistan in 1979. These reports also indicated which veterinary services were in greatest demand by the people of Afghanistan.

The importance of restoring the veterinary services in Afghanistan is confirmed by the number of nongovernmental organizations that have developed programs aimed at providing opportunities for veterinary field workers and at delivering veterinary medical supplies. The effort to expand veterinary service to Afghanistan has followed several complementary routes by locating available veterinarians, training paraveterinarians, and employing vaccinators. Several NGO's have undertaken the training of veterinary vaccinators and paraveterinarians as well as offering refresher courses for regular updating of these trained personnel. Many of these programs have been able to continue with the generous support of large funding agencies such as USAID and UNDP.

Several nongovernmental organizations include a veterinary component in their relief programs confirming the importance of reinstating and enhancing veterinary services to Afghanistan. Most of these organizations have accepted the task of supporting vaccinators and paraveterinarians inside the country. Meanwhile other efforts have pursued more ambitious avenues, including basic training for vaccinators, extensive training for paraveterinarians, and frequent opportunities for refresher courses for the veterinary field staff. The consultant explored the merits of many of these programs in extensive discussions with several of these organizations during his visit in Pakistan. These NGO's offered many observations which have been included in the pertinent sections of this report.

Further evidence of the importance of the veterinary services in Afghanistan is the new effort to service a wider area of the country as well as to concentrate more intensively on the areas already covered. The increased activity is being accomplished by the continued training of paraveterinarians and locating veterinarians to participate in the numerous programs. In some cases the NGO's have developed new training programs in which new levels of animal health care workers have been established such as the BVW's proposed by the Dutch Committee for Afghanistan (DCA) and the German Afghanistan Foundation (GAF) and the assistant veterinarian position planned by GAF. Likewise, MCI intends to train PVT's which in many ways parallels the training proposed for the BVW's planned by the groups based in Peshawar.

Much of the effort in the veterinary field to this point has been directed at preventing further decline in the livestock population from natural causes following the dramatic decrease in the number of animals as a result of more than a decade of war. In addition to decimating the livestock population, years of war and neglect have destroyed a significant portion of the infrastructure of the country. The residual political instability of the country and the damaged infrastructure combine to restrict the access of many NGO's to large areas of Afghanistan except for the easternmost portion of the country. This limited access naturally focuses the initial veterinary efforts on the eastern

provinces of Afghanistan which are still accessible from routes from Pakistan. Consequently, the cities of Peshawar and Quetta in western Pakistan have emerged as important centers of NGO activity.

So far most of the veterinary work for Afghanistan has concentrated on providing relief vaccination and deworming programs at no or little expense to the consumer. As these veterinary practices show positive results, they will increasingly gain acceptance with the local farmers. Eventually, it is hoped that these campaigns will reach a level of acceptance where the farmers will be more willing to pay for the benefits of medical service. Once the livestock owners accept the responsibility for the payment of services, then the subsidized programs may convert into sustainable enterprises that can continue with little or no outside participation by the NGO's.

Currently, the bulk of the veterinary activity directed for Afghanistan is located in Peshawar, Pakistan near the northeast border with Afghanistan. The substantial veterinary community in Peshawar, particularly DCA and GAF, has been able to reach extensively into the rural regions of northeastern Afghanistan. For these veterinary programs, Peshawar holds many attractive attributes. Because of its proximity to the Afghan capital of Kabul, Peshawar is the home of many educated professionals including veterinarians. Moreover, the large number of refugees in the city and the early establishment of veterinary training programs here provides a considerable human resource.

The large contingent of veterinarians and paraveterinarians has allowed the Peshawar veterinary community to reappraise its original programs, especially through the Veterinary Coordination Committee meetings of ACBAR. A review of the meetings of the ACBAR Veterinary Coordination Committee reveals that the most difficult issue is the establishment of an equitable charging policy. Perhaps the most significant medical issue is the introduction of a new corps of Basic Veterinary Workers (BVW's). The BVW's are part-time, village-based veterinary workers who supplement their regular income through the sales of medical services and medicines. The BVW is the Peshawar equivalent to the Private Veterinary Technicians (PVT's) proposed in the MCI/TUSVM program. The BVW program is discussed in greater depth in the section devoted to assessing the Dutch Committee for Afghanistan (DCA).

By contrast, the veterinary community in Quetta is still relatively small. Most of the conditions that make Peshawar so attractive are absent in Quetta. Although the contrast in the sizes of the veterinary communities is substantial, the importance of providing veterinary care to the livestock of the southern provinces of Afghanistan, which are more easily accessible from Quetta, should not be diminished. Several organizations have recognized the demand for more veterinary care in the southern provinces including Zabul, Khandahar, and Helmand. By adapting and adopting models from the Peshawar community, the veterinary community in Quetta is poised to develop programs to advance the needs of the Afghan herders in the southern region of the country. In response to these needs the

Experiment in International Living (EIL) has undertaken the training of paraveterinarians and several organizations, including MCI, have sponsored vaccination and paraveterinarian teams inside Afghanistan.

The need for veterinary care in the southern provinces has been demonstrated by the field studies on animal health conducted by Mariner and Findlen. MCI sponsored this field survey of livestock diseases and ethnic animal husbandry practices as the first step in developing a program for increasing the delivery of veterinary services to the southern region. The southern provinces are generally beyond the purview of the Peshawar-based organizations. Consequently, the design of a program in Quetta must consider the limited veterinary resources currently available in the city when compared to the resources available in Peshawar. The MCI/Tufts collaboration has devised a program that draws on the experience of the organizations involved in working with paraveterinarians while simultaneously weighing the limited veterinary service available through Quetta.

MCI/TUFTS PROGRAM

MCI/Tufts proposes a two stage training program for an expanded veterinary program in southwestern Afghanistan. The first stage of the veterinary program entails the training of experienced field workers. Because of the dearth of veterinarians presently based in Quetta, the most experienced veterinary workers available are paraveterinarians who have two to three years of experience working inside Afghanistan. These men will form the core of the first group of trainees. The first stage of the training should include two components. The first component should be a refresher course in which the instructor will review veterinary information including vaccination schedules, antibiotic uses, and minor surgical techniques. This refresher course would also serve as a good opportunity to cover in depth other material as determined by the instructor or at the request by the students.

The second component of the initial training session emphasizes the teaching role that these trainees will perform once they return to the field. These men should be reminded frequently that they are taking on a new responsibility which differs from their role as paraveterinarians. These men should be supplied with basic pedagogical devices, such as flip charts, reference booklets, and pictographic demonstration materials. Several of the paraveterinarians working for MCI have already expressed an interest in teaching illiterate and semiliterate farmers some of the basic techniques of vaccination and castration.

The second stage of the expanded veterinary program entails training selected Afghans to provide basic veterinary service. This phase of the training should occur locally to avoid the

displacement of the Private Veterinary Technicians (PVT's) from their primary activities at home. The training should be kept as simple as possible by limiting the scope of the training to the demonstration of basic medical techniques and to the recognition, monitoring, and reporting of only the most common diseases. Veterinary problems that go beyond the scope of this training should, in the ideal situation, be referred to the paravets in the area. Likewise the length of the training should be restricted to three weeks or less.

As the program is now envisioned, the PVT's are expected to continue with their primary activity, whatever that may be in the village or among family herds in the case of the koochi. In most instances, the program anticipates that the best candidates would be involved with livestock activities already as farmers with a few animals or as herdsmen with many animals. The veterinary service that the PVT's provide would give them with an opportunity to supplement their personal income through the sales of medicines and services without diminishing the importance of their primary source of income.

ACTIVITIES: SURVEY OF MCI VET RESOURCES

Over the last several years MCI has accumulated various pieces of veterinary information at its main office in Quetta. In the absence of a distinct veterinary project officer who could assume responsibility for this information, much of this material was filed throughout the office. Because of the extensive curfew in Quetta for the first week, most of my activities were limited to internal projects. During the first week, I collected the veterinary material and organized it into a more accessible resource. The reorganization of this material had the double advantage of reviewing the various issues in the veterinary programs directed at Afghanistan as well as reducing redundancy in the collection of information required for the PVT project. Both advantages became apparent when I attempted to solicit information from other NGO's involved with veterinary programs.

The curfew severely restricted movement during the first week. Consequently, I took this time to assess the MCI facilities for training PVT's. One of the buildings at the main office of MCI in Quetta has a conference room that is large and comfortable. This room is perfectly suitable as a lecture room. In addition, MCI can provide other educational support in the form of a slide projector, overhead projector, and paper supplies. In any event, any equipment needed for the teaching program should be available at the market in Quetta. In addition to supplying educational material, MCI is also prepared to provide the room and board for the students enrolled in the program.

of the veterinary medical supplies in the event that the MCI veterinary program takes on the responsibility of the distribution of veterinary supplies in southwestern Afghanistan. Although MCI has every intention to eventually leave the distribution of medical supplies to private businessmen, the large warehouse facilities at MCI can play a significant backstopping role until a vital market for these supplies is in place.

PARAVETS AS TRAINERS

In an ideal situation the second stage of the training program would use Afghan veterinarians as the trainers of the PVT's. Again, the dearth of veterinarians in Quetta severely limits the number of candidates for this role. Instead of using veterinarians, the program will probably resort to the next level of veterinary training, namely the paraveterinarians working for the UNDP livestock vaccination campaign. Of the NGO's based in Quetta, MCI has the largest veterinary program with six full-time paravets. These men have worked inside Afghanistan for the past 2 to 3 years since completing the DCA paraveterinary training course in Peshawar.

During my interviews with these men, I investigated their medical knowledge and inquired about the conditions in the field including some of the problems encountered when delivering paraveterinary service. The interviews also provided an opportunity to discuss the training program for PVT's. All of the paravets expressed an interest in continuing their training and in taking on new teaching roles. Several men claimed that they had taught some villagers how to vaccinate their animals and how to use the burdizzo for bloodless castrations. After the new program had been explained to them, they saw it as a logical extension of the work that they were already doing. All six of the MCI paravets wanted to participate in the new program.

ASSESSMENT: Because there are so few veterinarians currently available in Quetta, the paravets here have an opportunity to take on considerable responsibility with the PVT program. If MCI elects to transfer some of the paravets that it employs in the UNDP vaccination program to the PVT program, the paravets will take on teaching responsibilities and perhaps become involved with the distribution of medicines, conducting refresher courses, and monitoring of PVT performance.

The following men were interviewed by the veterinary consultant on October 20, 1991 at the MCI main office in the presence of a translator (Namatullah) and the MCI veterinarian (Dr. Fateh Mohammed). All four men were enthusiastic about receiving further training and about the program to teach villagers about basic veterinary care. These paraveterinarians claimed that they included an element of teaching in their work already as they demonstrate vaccination, castration, and medication.

Several of these men would be suitable candidates for the first stage of the MCI/Tufts PVT program. Unfortunately, Dr. Fateh Mohammed does not have a good enough command of English to describe the subtleties of character of these men. Even if he could describe these men more fully, he has shown reluctance to criticize any of his countrymen. Ramatullah, the Afghan Agriculture Coordinator, should be consulted regarding the character of these men before the Veterinary Coordinator makes a final decision about including any of them in the training program. One caution to the Veterinary Coordinator is that one of the paravets is Ramatullah's brother.

1. Ghulam Farouq, son of Khudia Kahim: Because he demonstrated the best English skills in this group, he led much of the discussion regarding the conditions in the field. For identification, he has bloodshot eyes, a long scraggly beard, and confidence. My first impression of Ghulam Farouq is that he would be a suitable trainer of the PVT's.

2. Ali Mohammed Agha, son of Sayid Allah Dad: The tallest of the paraveterinarians was quiet during the meeting probably because his English is minimal. He talks quite a bit with his comrades. Myron says that he has been known to take off for Quetta while claiming to be in the field. Otherwise, he gives an impression of being interested in what is going on.

3. Ghulam Hazrat, son of Mohammed Hashim: This paravet is a small active man with the green cap that conforms perfectly to the shape of his haircut. His English is present but he seems to understand more than he can express. His eyes are bright and I suspect that he is too. He may be a good candidate for the first course.

4. Osmanghani, son of Baridad: This is the man who has a bit of a basset hound expression about him. He hardly said anything during the entire group interview. It is difficult to tell what is going on inside. He does not talk much with the others in a group setting although there is no obvious castigation either. He is the paravet for the vaccination team in the Arghestan District of Khandehar Province.

The two remaining paravets working for MCI were interviewed on October 21, 1991 in the presence of Dr. Fateh Mohammed. We discussed the problems in the field and the project to train PVT's. Both men were enthusiastic about the new program. As I understand the situation, these paravets did not come to the previous meeting with the other four paravets because they went to the bazaar instead. If this explanation is true, I am not

sure how this behavior reflects on these two men. More details are needed with clarifications from other Afghans.

5. Sayd-hassamadin: This short, round paravet is gregarious with some very basic English. His arrival to the main office was greeted warmly by his colleagues. His open personality would be a positive contribution for a new teaching program. He should be seriously considered for the first group of trainers.

6. Abdul Hakim: This paravet has a triangle-shaped head. He does not speak much, even among his colleagues, seeming to wait for the right moment to make his mot juste. He strikes me as being sharp, keenly aware of the situation. At first I was struck by his intelligence, but in retrospect I am not sure if he is capable of talking enough to be a teacher.

INTERVIEWS WITH NEW PARAVETERINARIANS

If the paravets who are presently working on the MCI vaccination teams are recruited for the PVT program, then a gap in the UNDP vaccination program will develop. MCI is committed to continuing this program. Consequently, any paravets removed from the vaccination program should be replaced with other paravets. A continued influx of paravets into Afghanistan should also contribute to the future of veterinary service in the country with the presence of skilled work force and as an important liaison between veterinarians and the PVT's. There is still ample room for the expansion of all categories of veterinary service.

With these points in mind, I interviewed a total of seven paravets who had recently completed the six month paravet course offered by EIL in Quetta. In the interest of expanding the MCI veterinary program, I recommended that all seven men have an opportunity to join one of the three vaccination teams that MCI now sponsors. According to the current schedule, men who are hired now would have an opportunity to work with more experienced paravets for about two months before the current paravets would be withdrawn for the PVT program.

ASSESSMENT: I recommended that MCI should hire these seven new paravets. They should join one of the three vaccination teams now working for MCI in Afghanistan. Two of the men struck me as possible candidates for the PVT program. If they do join the program, then it is even more important for them to begin work in the field as soon as possible.

1. Mohammed Naem: This paravet reportedly finished first in his class at EIL. He is a serious man who speaks no English. When he does speak, however, he is apparently respected by his colleagues. He is from Helmand Province. I suspect that he is ready to enter the first class of trainers.

2. Noor Ali: This man spoke some English. He is friendly,

mature, and respectful. He finished the ninth grade. He has the potential for being a good instructor.

3. Mohammed Nabi, son of Shir Alli: This paravet lost his right leg to a landmine. He has difficulty walking long distances but assured me that he could travel well on the tractors. He asked whether there are any stationary clinics for the paravets. This is another good idea whose time has not come. He finished the eleventh grade.

4. Sharaf ulDin, son of Abdul Habib: When he approached me by himself, he was able to squeeze out a few words of English. Otherwise, he depends on others to speak for him. He is a bright-eyed, young paravet who wants this job very much. He finished the eighth grade.

5. Din Mohammed, son of Khair Mohammed: This serious, well-spoken Khandahari will make a good paravet.

6. Saed Assadullah: Please review the comments on this man's application to make a preliminary assessment of his potential.

7. Mzeman Hayatullah: This young and squirrely paravet was the first recent EIL graduate to apply for work. What the hell; give him a chance. His self-effacing ways may result from his inapparent English skills.

INTERVIEWS WITH VACCINATORS:

MCI has three mobile vaccination teams stationed inside Afghanistan. These teams concentrate their activity in Khandahar province with some work in southern Zabul province and eastern Helmand province. The vaccination teams are composed of vaccinators, paravets, and tractor drivers. The vaccinators working for MCI were trained by EIL or by DCA in a month-long course. The content of the basic vaccinator course covers vaccination techniques, timing of vaccinations, and bloodless castration techniques.

I interviewed three of the five vaccinators that MCI employs as part of the UNDP-sponsored Animal Health Programme for Southwest Afghanistan. Two of the MCI vaccinators remained in Afghanistan for some unknown reason. One of the vaccinators who came to the interview seemed bright and had a good understanding of the goals of the vaccination program. He is probably ready to progress to the next available paravet course. The other vaccinators failed to give a strong impression of their knowledge or interest. Poor health in one case and poor language skills in the other case probably contributed to this weak impression as both men expressed their willingness to participate in an upgrading of their skills.

If the Quetta veterinary community follows the lead of the Peshawar groups, the NGO's in Quetta should start to phase out the vaccinator position and begin to push for higher levels of training from the most promising vaccinators. In the future the role of vaccinators can be taken over by the increased number of paravets and by the PVT's who will have been trained by the paravets. In time the MCI program will want to recruit many paravets for a program of expanded veterinary service. Reviewing the work of vaccinators may be one way to screen potential candidates for a paravet program while simultaneously providing the Afghan communities with valuable vaccination services.

Two groups, MCI and UNDP, monitor the performance of the three MCI mobile vaccination teams. MCI recently hired an Afghan veterinarian, Dr. Fateh Mohammād, to supervise the work of the veterinary teams stationed in Afghanistan. The MCI veterinarian divides his time between reviewing the monthly field reports submitted to the MCI main office in Quetta and working directly with the teams in Afghanistan. The MCI veterinarian has not identified significant problem areas in the vaccination program, in part because he is new and in part because he seems reluctant to speak unkind words about his countrymen.

As the program sponsor, UNDP also hires a veterinarian to monitor the activities of the vaccination teams in the field to assure that the work is performed according to the agreement between MCI and UNDP. Because this monitor is more detached from the men in the vaccination teams, he is more likely to identify some of the problems in the vaccination program. The UNDP field reports should be available for review by the Veterinary Coordinator at MCI.

ASSESSMENT: The vaccinators currently provide an important service for the people of Afghanistan. However, as the vaccinator position is phased out in favor of the PVT's, the MCI vaccinators will lose their job security despite their training and their experience in the field. Eventually, the MCI program will hire paravets, trainers of PVT's, and PVT's. Consequently, all vaccinators now working for MCI should be encouraged to take one of the paraveterinary courses as soon as one is available. The performance of the vaccinators working now can be used as a screen for potential paraveterinary students.

I met with three MCI vaccinators in October. Two vaccinators employed by MCI elected to remain in Afghanistan for some unknown reason.

1. Sharafudin: This vaccinator was able to express himself a bit in English. Consequently, he led the conversation for the other two vaccinators who apparently lacked any English. This man impressed me as wise and with a grasp on what MCI is trying to accomplish with the new program. I strongly recommend that he take the paravet course as soon as possible. He was interested in enrolling in this course.

2. Ghulam Sakhi: This man remained silent throughout the interview. I suspect that he understood none of the English and became bored and frustrated with the interview. It was easier for him to depend on Sharafudin to translate. I had the

impression that he showed more interest than he really had, just to go along with the group. My first impression was neutral and leaning toward the negative side. To be fair to this man, his performance should be looked at more closely before any decisions are made concerning further training.

3. Abdul Hagri: This man was sick during the interview. He looked wiped out so it is difficult to have a strong impression of him. I suspect that he is brighter than his sickly indifference indicated. As with Ghulam Sakhi, his performance should be reexamined to assess his potential as a paravet.

A man who graduated from the DCA vaccinator course in October 1990 applied for work as a vaccinator. Khan Mohammed, son of Alam Gul, worked for several months with Matthijs Toot surveying the Helmand Valley irrigation scheme. He has not worked as a vaccinator. MCI is not looking for vaccinators at this point. With the influx of new paravets joining the vaccination teams, any attrition of vaccinators should be more than adequately covered by these paravets. Khan Mohammed should be encouraged to enroll in a paravet course.

INTERVIEWS WITH TRANSLATORS:

Translators will play several important roles in the PVT training project. They will be asked to translate lectures given in English and the corresponding lecture notes to Farsi and Pushtu. The translators will also be expected to relay questions from the students to the lecturer. In addition to assisting with the lectures, the translators will also be involved with the practical demonstrations. Finally, the translator will be a valuable assistant to the supervising veterinarian during program monitoring, information collection, and on-site inspection visits.

The translator should demonstrate several qualifications to be successful in this program. First, he must move comfortably between English, Farsi, and Pushtu. Second, he should become familiar with terms specific to veterinary medicine. Any experience in medicine and in livestock would strengthen a candidate's application. Third, he should be comfortable in the filthy swirl of living animals. Fourth, he must be willing to work and move inside Afghanistan. Finally, he should be compatible with the veterinary staff, the students, and the Afghan villagers.

I interviewed several candidates for the translator position. In a few cases the salary of 2,500 Rupees per month was seen as too low. I recommended that MCI hire Ghulam Mohammed, an Afghan who has worked for several years as a nurse and translator at a hospital in Quetta. He left this position after a disagreement with one of his supervisors. I am confident that he will be able to apply his human medical knowledge to

WAREHOUSE:

The imposition of the curfew also gave me an opportunity to inspect the MCI warehouse. MCI maintains a warehouse for medical supplies a short distance from the MCI main office in Quetta. The warehouse contains three rooms. The area of the primary storage room exceeds 2,000 square feet while the two smaller rooms have a combined area of approximately 250 square feet.

The human medical supplies distributed by MCI to its three hospitals, 3 outpatient clinics with doctors, 27 outpatient clinics without doctors, 16 mobile teams, and 5 WHO clinics in Afghanistan are stored in the main warehouse. At first glance this warehouse appears to be very well organized so that all items are readily accessible. This impression is confirmed by the computerized inventory control and cataloguing system which allows the full-time pharmacist to identify immediately the number and location of all available stock.

At present there are no cold storage facilities in the warehouse. Vaccines that require freezing or refrigeration are delivered directly to the locations where they are to be used. The MCI pharmacist is not involved with the medicines requiring cold storage.

Veterinary medical supplies could easily be stored in any combination of the three rooms at the warehouse. The main warehouse currently stores some veterinary supplies. The unused portion of the main warehouse could easily be adapted for the storage of veterinary supplies. For the future, the pharmacist prefers to have the veterinary items stored in the two smaller rooms. Whereas these two rooms are presently empty, the veterinary supplies could be isolated from the more abundant human medical supplies. Keeping the veterinary items separated from the human medicines will reduce the possibility of any confusion between the veterinary and human medicines, especially items such as antibiotics.

I was very impressed by the competence of the MCI pharmacist, Mohummad Amman. He assured me that the warehouse can assume responsibility for the veterinary medicine inventory with little additional burden if the veterinary supplies are entered on the computer following the system used for the human medicines. There is no reason to doubt that this would indeed be the case.

The MCI warehouse can accommodate a considerable expansion.

veterinary work. This personable Afghan possesses good language skills. This candidate's biggest weakness is lack of experience handling livestock. He did, however, express a willingness to learn and seemed prepared to take on the challenge with enthusiasm.

ASSESSMENT: MCI hired Ghulam Mohammed on this recommendation. His first two weeks on the job have been exemplary as he has graciously responded to the requests from several staff members at MCI to translate for several different situations. I am pleased with the assistance that he has competently delivered during my interviews with the Afghan veterinary staff.

WHAT ABOUT HIRING A TEACHING VET?

All of the NGO's with veterinary training programs employ Afghan veterinarians to teach the veterinary courses. This approach has its advantages and disadvantages which should be weighed. With native language speakers direct communication is easier and more clear. The indigenous speakers also avoid the awkward problems with delays in translation or with missed translation. Afghan instructors could forge a stronger working relationship that may be especially important sustaining support for the trainers when they are in the field.

The most critical disadvantage would be the potential loss of control of material being taught as far as accuracy and relevance.

MCI recently hired Dr. Fateh Mohammed as the staff veterinarian. He is a graduate of the veterinary college at Kabul University. Currently, he is primarily responsible for supervizing the UNDP sponsored program for the mobile vaccination teams. As the number of paravets on the staff increases and, hopefully, as the number of veterinary field workers increases overall, the role of the supervisory veterinarian will become even more important and demanding. To add teaching responsibilities to this position may place an overwhelming burden on a single staff veterinarian. At this point I think it would be asking too much of Dr. Fateh Mohammed to take on a dual role. If another staff veterinarian is hired to assist with the instruction, he should have an adequate command of his English to freely understand the essential input from Dr. Sherman. I am not sure that Fateh Mohammed's language skills are up to this level at this point. His English is improving with practice, but he does need more practice to be clear.

On November 7, 1991 I interview Dr. Abdul Ahmad, an Afghan veterinarian who graduated from a Russian veterinary college two years ago. After he finished veterinary school, Dr. Ahmad returned to Maruf District in Khandahar Province as a

veterinarian for ARC. He left this work because the pay was inadequate for him. He speaks Russian, Pushto, and Persian. He is willing to learn English. I suspect that a few English lessons will bring back some of the English that he has been exposed to through school. I recommend that MCI offer some English lessons to him when he is hired.

He found out about MCI from his brother who works for a demining institute based in the Swat Valley. Dr. Abdul Ahmad is a bright, alert veterinarian who could give valuable assistance to the MCI veterinary program. With some guidance he should be able to grow and develop his veterinary skills. He is willing to work inside Afghanistan as well as in the classroom and welcomes every opportunity to prove his abilities.

Dr. Safi is an Afghan veterinarian working for the UNDP in Quetta. His wife is also a veterinarian who is currently working in Peshawar. She may be interested in pursuing veterinary opportunities in Quetta. Because she is a woman, it probably would be impossible to hire her as a teaching vet for classes filled with men. However, if a parallel program directed at training women, especially if a poultry component could be instituted, she may be able to play an important role at MCI. Removed from a direct teaching role, she may be able to help Dr. Sherman with course preparation and with translations and pictographic interpretations of veterinary materials.

DEFINITIONS OF VETERINARY WORKERS

Because several NGO's have developed their veterinary programs independent of an overall plan for providing veterinary service, some confusion surrounds the titles of veterinary workers employed by different NGO's. To reduce the possibility of confusion during the discussion of the veterinary programs of different NGO's in Afghanistan and Pakistan, a brief summary of the different titles is included here.

DCA, GAF, and EIL use the term "paraveterinarian" to identify the men who have gone through a comprehensive course lasting 5 to 6 months in Peshawar or in Quetta. In general, Afghan veterinarians teach these courses with administrative assistance from the sponsoring NGO's.

GTZ also uses the term "paraveterinarian" to refer to the villagers in Baluchistan who go through a three week program under the direction of a Pakistani veterinarian. The training of the GTZ paraveterinarian more closely resembles the training received by the Basic Veterinary Workers (BVW's) at DCA and GAF, the Livestock Specialists at AKRSP, and the PVT's at MCI.

Finally, there are two other levels of veterinary workers in the aid community. Vaccinators are men who have undergone one

month of training in vaccination techniques and theory at EIL, DCA, or GAF. The vaccinator course is usually incorporated into the broader paraveterinary course offered by these three NGO's. GAF has proposed the establishment of another level of veterinary worker. The Assistant Veterinarian would be an upgraded paraveterinarian position.

TRIP REPORT:

During the course of this trip to Pakistan, I have had an opportunity to meet with several organizations which have or are planning to have training programs for village-based veterinary workers. Many of these programs strive to attain the similar goals that MCI aims for with its PVT program. Of course, there are obvious differences between these various programs such as location, financing, and the details of implementation. However, there were enough similarities to justify a further investigation of these programs with the intention of discovering the most suitable way to undertake a new training program.

UNDP

I met with the UNDP staff veterinarian, Dr. John Woodford, on several occasions to discuss the state of veterinary care in Afghanistan. There is no doubt that 12 years of political instability has devastated the livestock population. The UNDP has a vested interest in the development of veterinary programs inside the country as it actively supports the efforts of several NGO's, including MCI, to deliver basic veterinary service. Currently, the UNDP funding supports several veterinary activities including vaccination against enterotoxemia and anthrax, providing worming medicines, and underwriting training and salaries for paraveterinarians and vaccinators.

UNDP has reiterated its interest in developing a veterinary program for the country. While supporting the training of paraveterinarians is a rewarding avenue, it suffers from several problems including its expense, its duration, and its

displacement of Afghans from their homes. So far, these inconveniences have been rewarded with the delivery of increased, but limited, veterinary care. The limited veterinary care is particularly evident in the southern provinces of Afghanistan where few NGO's actively participate in supporting vaccination teams.

With the exceptions of the training programs for the paraveterinarians and the vaccinators, the aid efforts directed at Afghanistan have focused more on providing relief than on promoting development. The provision of free medicines, vaccines, and veterinary equipment underscores the dependence of Afghans on external assistance. The general consensus among all NGO's and UNDP, is to gradually steer away from the programs which garner dependency toward programs which will become self-sustainable in the absence of foreign NGO's.

ASSESSMENT: UNDP is now assisting MCI with financial support for an animal health care program for Southwest Afghanistan. The three vaccination teams, composed of 5 or 6 men each, work in the Helmand and Khandahar Provinces. The objectives of this program are to reduce the incidence of disease among livestock, to increase the number of trained paraveterinary personnel in the project area, to reduce the mortality rate of animals being castrated, and to institute a survey of settled and nomadic populations in the project area.

German Agency for Technical Support (GTZ)

The German Technical Assistance Foundation (GTZ) is an organization based in Quetta which works with the Baluchistan Rural Support Program. The venue of GTZ's programs is limited to Baluchistan, the westernmost province of Pakistan. Quetta is the capital and largest city in Baluchistan. Among other programs, GTZ helps with the coordination of a veterinary program in Baluchistan. I met with Ludwig Mayer, the director of GTZ, one afternoon in Quetta to discuss the mechanics of the veterinary program.

GTZ works closely with Union Councils to implement its rural programs. The Union Councils serve as the basic political village organization. In the larger villages there may be more than one Union Council. More usually, however, several outlying hamlets comprise one Union Council. GTZ assumes a role of assistance only. Major decisions such as who should be enrolled in the training programs and who will sponsor the delivery of animal health care are left in the hands of the Union Councils.

The villagers select their candidates for the paraveterinary training. Once the candidate is selected, he and the Union Council are held accountable for any loans that the veterinary service incurs for equipment, training, medicines, and support. GTZ has installed a multiple tier loan system for the establishment of a permanent veterinary service to the Union Council. In some cases the loan is guaranteed by the paraveterinarian himself. Initially, however, GTZ demands that the Union Council must guarantee any loan given to support the paraveterinary project. According to Mayer, GTZ has, in the past, experienced a great deal of difficulty in sustaining an animal health care program for the lack of personal accountability. The system of gradually larger loans forces the Union Councils and the paraveterinarians to act responsibly toward the assistance that GTZ offers.

GTZ refers to its animal health care workers as paraveterinarians. These workers receive three weeks of basic veterinary training in a program that is on a par with the PVT program proposed by the MCI/Tufts collaboration. GTZ has a staff of Pakistani veterinarians who teach the basic course and who monitor the work of the paraveterinarians. The training section of GTZ has also developed a course curriculum for the paraveterinarian training which Mr. Mayer generously shared with MCI. The animals used for the practical training in the course are provided by the villagers in the Union Council. As with all the programs that I reviewed, supervision and follow-up are central to the success of the program.

ASSESSMENT: The GTZ system of demanding accountability through loan guarantees is probably too difficult to apply in the more tenuous political and economic climates of Afghanistan. The goals of the GTZ paraveterinarian training parallel the objectives of the MCI/Tufts program. The director of GTZ has been very cooperative and willingly shared the syllabus of the paraveterinarian course. There is every reason to believe that the GTZ experience in Baluchistan will continue to offer valuable insights for the conduct of the MCI/Tufts program.

HEALTH UNLIMITED

Health Unlimited (HU), a small NGO based in London, is dedicated to delivering assistance to communities living amidst conflict. From its office in Quetta, this organization focuses

its activities in the Afghan city of Darjeepan in Helmand Province. Health Unlimited has been providing human health care to Darjeepan for approximately seven years, which represents a long-term relationship with the community. According to its program director, Peter McGeachi, Health Unlimited has recently begun to explore the possibility of adding a veterinary component to its services in Darjeepan. Presently, there is a British veterinarian, Tim Leyland, in Darjeepan investigating the animal health care situation there. He is expected to return to Quetta sometime in December of 1991 with a report of his findings.

The staff at Health Unlimited seems quite amenable to sharing the information it gathers in Afghanistan. This cooperative spirit will undoubtedly continue with requests for Leyland's report in the winter of 1991-1992. The Health Unlimited approach to animal health care may shed some valuable light on how to approach the delivery of veterinary care to the southern provinces of Afghanistan. The approach of this NGO differs from the strategies of most other NGO's in that it emphasizes its longstanding relationship with the community it serves before it institutes a program. The report from Daaarjeepan may reveal some valuable insights that only years of trust can reveal about the status of livestock in the community.

SAVE THE CHILDREN FUND - US (SCF-US)

Save the Children Fund has an office in Quetta. Among other activities, SCF sponsors two veterinary vaccination field units in Khandahar and Zabul Provinces with support from UNDP. There is at least one paraveterinarian in these mobile vaccination teams. The teams are currently vaccinating against anthrax and enterotoxemia as well as providing basic veterinary care such as deworming and bloodless castration. The SCF veterinary program parallels the similar programs offered by MCI under UNDP sponsorship.

In 1989 MCI and SCF had a joint program for mass vaccination against anthrax and blackleg in the Shorowak, Aragastan, Maruf, and Atagan/Shinkay Districts of Afghanistan. MCI's responsibilities in the program included providing a tractor and trailer for the transport of supplies and personnel, providing vaccines and medications and providing supervision in Shorowak, Argostan, and Maruf. The SCF responsibilities were to provide one trained vaccinator to work in the program and to supervise the program in Atagan/Shinkay Districts. The two participating NGO's shared the information generated from these vaccination campaigns.

Matthijs Toot is now responsible for overseeing the SCF veterinary program. Toot has worked for MCI in the past and has a good relationship with MCI personnel. Most recently he worked with Chip Stem on the Helmand Valley Project and remembers him

fondly. Although the SCF veterinary program is small, it may provide some insight to the problems with delivering animal health care to Afghanistan. Toot is particularly cooperative in sharing his extensive knowledge of the conditions in the field. He is a reliable ally and a valuable resource for information.

ASSESSMENT: SCF and MCI have cooperated in the past on the vaccination program sponsored by the UNDP. Matthijs Toot, who now directs the veterinary program for SCF, has a long and amicable working relationship with MCI. Depending on the health of the SCF veterinary program, SCF may be a source of information regarding the availability of veterinary staff in Quetta.

The AGA KHAN RURAL SUPPORT PROGRAMME (AKRSP)

The Aga Khan Rural Support Programme is a private, non-profit company, established by the Aga Khan Foundation to help improve the quality of life of the villagers of northern Pakistan. It was established in 1982 with a mandate to focus on income generation in collaboration with government departments, elected bodies, national and international development agencies, and commercial institutions. At its headquarters in Gilgit, Pakistan, the AKRSP has developed a large number of programs that are designed to produce sustainable, long-term solutions for the proper management of natural resources in the Northern Areas and the North West Frontier Province of Pakistan. AKRSP's program consists of a multi-pronged effort to improve cereal and fodder crops, fruit and vegetables, livestock production and productivity, and the forestry sector.

Among the projects developed by the AKRSP is a training program for animal health care workers. The AKRSP applies the term Livestock Specialists to these village-based veterinary workers. The training and expectations of the Livestock Specialists are similar to the training and expectations of the PVT's in the MCI/Tufts program.

All of the AKRSP programs use the Village Organization as the basic operating unit. The Village Organizations are composed of roughly 150 households which have a collective interest in developing specific projects. In the case of the livestock program, the Village Organization selects one person from its ranks to receive three weeks of training in basic veterinary care at the AKRSP headquarters in Gilgit. The AKRSP transports the trainees as well as provides room and board for the duration of the course. The course material itself covers the fundamentals of restraint, vaccination, deworming, diagnosis of some common diseases, and some practice with techniques. Consistent with the effort to integrate its agriculture programs, the Livestock Specialists are also taught how to make and manage silage.

Upon completion of the course, the Livestock Specialist is

expected to return to his Village Organization to serve the livestock needs of his home. To start the Livestock Specialist in his new position, the AKRSP gives him a basic medical kit. The trainee is expected, however, to pay for the subsidized medicines with his own money or with money loaned to him by the Village Organization. Once the Livestock Specialist returns to his Village Organization, he charges for the basic veterinary service at rates established by the AKRSP. The policies of the program are clearly explained to the Village Organization before any trainees are selected for the livestock program. Because the Livestock Specialist is selected by the Village Organization that he serves, his services and rates are generally accepted by the community.

A few comments should be made about the way the program actually works at this time. Several years of experience with this program have shown the AKRSP that actually about three Village Organizations are required to provide enough cases for a Livestock Specialist to stay in business as a full-time animal health care worker. Second, as the program now stands, the Livestock Specialists depend completely on the AKRSP for the supply of medicines. The AKRSP continues to buy and to sell these medicines at subsidized rates which do not reflect their market value. The AKRSP has made no attempt to establish a competitive pharmaceutical market in the Northern Areas. Third, the Livestock Specialists require frequent monitoring from the AKRSP staff to assure that the work they perform is actually consistent with good animal care. The monitoring includes an assessment of job performance as well as refresher courses lasting several days.

When I visited the AKRSP, I met with several veterinarians, including Dr. Farman Ali, the Programme Livestock Specialist; Dr. Mashkoor Elahi, Livestock Consultant Trainer; Dr. Ghulam Sarwar and Dr. Karim Khan in the Regional Programme Office. The people who can the most assistance are Dr. Farman Ali and Dr. Iqbal Hussain, the Regional Project Manager. Unfortunately, I was unable to meet Dr. Hussain who was unavailable the day I visited Gilgit. Dr. Hussain reportedly has a copy of the course curriculum which was otherwise impossible to get from the other veterinary staff.

ASSESSMENT: In general, the AKRSP program emphasizes three points: 1. organization and collective management, 2. upgrading human skills, and 3. the generation of capital through savings. All of these principles could be applied to the MCI/Tufts PVT program. I was impressed by the extensiveness of the program. The content and the length of the training course are very close to what the PVT program aims for. Regrettably, I was not able to obtain a curriculum or flip charts while I was there despite the best efforts of several people to help me. Dr. Iqbal Hussain should be contacted to get this information. The idea of introducing silage production should be explored for the MCI paraveterinarians if not the PVT's too. The importance of frequent monitoring of skills and refresher courses was emphasized by the AKRSP after the program lost some ground in its

efforts to establish sustainable animal health delivery. The AKRSP makes no apologies for its continuing subsidies for veterinary pharmaceuticals. This last point is inconsistent with the objectives of an independent and sustainable veterinary program and should be avoided by the MCI/Tufts program.

The Dutch Committee for Afghanistan (DCA)

The DCA has led the efforts of NGO's to provide veterinary care to Afghanistan through its Veterinary Training and Support Centre (VTSC) in Peshawar since it began its activities in 1987. Over the years, DCA has taught over 200 paraveterinarians in its five month course and several hundred vaccinators in its one month course. In the usual case, the vaccination course is added to the paraveterinarian course so that after 6 months of training, the paravets are able to perform both jobs.

The DCA has a large training facility in Peshawar town where a staff of Afghan veterinarians teach its courses in Farsi. The students who are recruited from inside Afghanistan and from the refugee camps are provided with room and board for the duration of the course. Some students are sponsored by other NGO's interested in including a veterinary component in their programs. The paraveterinary students do their practical training at the VTSC training facilities and at a refugee camp near Peshawar.

Once the paraveterinarians complete their training they can begin their work inside Afghanistan. DCA system is structured around the veterinary field unit. According to the DCA system, the veterinary field unit centers on a full veterinarian who works out of a stationary clinic. Four or five paraveterinarians are stationed in communities placed around the clinic. With this configuration, the veterinarian can supervise the activities of the paravets positioned around him as well as supply them with medicines. In the current scheme, the veterinarian has one assistant assigned to him at the clinic. This assistant is generally a vaccinator who monitors, among other activities, the inventory in the clinic.

DCA now plans to alter the present arrangement by dispensing with the vaccinator position and by adding a new category of animal health care worker. The new position, the Basic Veterinary Worker (BVW), will become a vital component of the veterinary field unit as it assumes some of the functions of the vaccinators in a different setting. As with the paraveterinarians, the BVW will be positioned around a central veterinary clinic occupied by a full veterinarian. Similarly, the BVW's will fall under the direct supervision and supply network of the central clinic.

According to the new design, The BVW's will be recruited from and stationed in their home villages. The villages with BVW's will fill the gaps in service offered by the paraveterinarians and the full veterinarian. Because the BVW's

will have only a minimal amount of training, the nearest paravet or the veterinarian will continue to handle the more difficult veterinary problems.

With the phasing out of the vaccinator position from the Veterinary Field Units, the responsibilities of the veterinarians will increase. In addition to providing medical care to his own cases, the veterinarian will monitor and supply both the paraveterinarians and the BVW's in his field unit. The veterinarian will also assume the responsibility for the training of the BVW's.

Ideally, the BVW's will be selected by members of the community that he will serve. Once his training is completed, the BVW will continue in his primary activity. DCA anticipates that most of the BVW's will earn their living as farmers/herdsmen. The training and the responsibilities of the BVW strongly resemble the program proposed for the PVT's working for MCI/Tufts. The veterinarian will conduct a two week training course somewhere in the operating area of the VFU. The central clinic is the most likely venue in most instances. The training will include the fundamentals of vaccination and technique, bloodless castration and deworming. Minor wound treatment and some antibiotic use will probably also be included in the training.

This new program has been accepted by the Veterinary Coordination Committee of ACBAR. The basic scheme has also been adopted by the other major veterinary training center in Peshawar at GAF. The ACBAR members have developed a manual in Pushtu and Farsi for training the BVW's. The manual should be translated into English soon.

DCA intends to establish a sustainable program of veterinary service by allowing each member of the VFU to collect a small fee for each case he sees in addition to retaining a percentage of the sale of medicine. Ten percent of all nonvaccine medicine sales will be kept within the VFU. For example, when a BVW buys medicine from the VFU veterinarian, the veterinarian is allowed to retain 2% of the sale price for himself. Because the sale price is already marked up 10% over the subsidized price, the BVW will be able to retain 8% above the sale price for himself. The sale price is established by the DCA and is consistent for all the VFU's under DCA jurisdiction.

The establishment of a suitable charging policy has been a matter of furious discussion since the inception of the Veterinary Coordination Committee of ACBAR. The charging policy is discussed more fully in the assessment of the visit to ACBAR.

DCA is cooperating with MADERA on several veterinary projects. The two NGO's have retained some separation based on their different policies regarding the price for services. MADERA relies on DCA for its veterinary expertise in these collaborative programs.

DCA is also linked to MCI. MCI has served as the conduit for veterinary vaccines produced at the Veterinary Research Institute (VRI) in Quetta. DCA is one of the organizations that MCI delivers vaccine to.

ASSESSMENT: The DCA has a well-established program for delivering veterinary care. The entire veterinary community at Peshawar is now going through a process of rearranging the configuration of the veterinary system with the goal of increasing the delivery of veterinary service by deepening the level of the training of an expanding number of workers.

DCA was completely willing to share information about its program verbally. However, when I requested some printed material regarding its training program, the program director was unwilling to surrender copies of these notes. I sense that the rivalry between the NGO's in Peshawar has contributed to this unfortunate insecurity. Nevertheless, the BVW manual should be available through the Veterinary Coordination Committee of ACBAR.

German Afghanistan Foundation (GAF)

The German Afghanistan Foundation (GAF) is also based in Peshawar. In many ways the GAF veterinary program resembles the program offered by DCA. As one of the two largest promoters of veterinary training for Afghans (DCA being the other major voice), GAF exerts considerable influence on the coordinated efforts of the NGO's participating in veterinary programs in Peshawar. The ACBAR guidelines for livestock and veterinary services (included in the appendix) help to align the GAF program with the DCA program. Rather than repeating the details of the Basic Veterinary Worker (BVW) training program here, I refer you to the outline of the program discussed under the Dutch Committee for Afghanistan (DCA).

Some of the differences between the two programs are worth mentioning. First, the GAF program is now run entirely by Afghans, as far as I can tell. No expatriates were apparent during my visit to the main office where I met Dr. Saed Mohammed or at the training facility at the edge of town where I met several of the Afghan veterinary staff. Second, GAF plans to introduce a new position in its veterinary program. According to this proposal, the most promising paraveterinarians will be recruited to enroll in a special course to upgrade their training. The newly-trained paraveterinarians will be designated as Assistant Veterinarians. Third, GAF intends train more vaccinators. Presumably, the vaccinators will continue to function as they have in the vaccination teams despite the plans by DCA to phase out the vaccinator position.

The GAF staff was generous with the written material that they had available. I made several copies of some the Farsi notes that the teaching staff had prepared for their students. These notes are now in the small veterinary library at MCI. Dr. Saed Mohammed, the assistant director of GAF, also contributed a draft of the BVW Manual to the MCI library. Unfortunately, the man who

is ultimately responsible of the curriculum of the paraveterinarian course was not available during my visit to GAF, so I was unable to obtain a complete copy of this syllabus.

ASSESSMENT: The staff at GAF showed a tremendous willingness to discuss their veterinary program. When it came to offering printed material, the staff seemed more open, but less efficient, than the staff at DCA. As far as I could tell from these discussions, the program is working within reason. This organization can be approached for assistance in the future.

Experiment in International Living (EIL)

The Experiment in International Living (EIL) is a Quetta-based NGO that places its greatest emphasis on training. In the case of the veterinary subjects, EIL currently conducts a five month course for paraveterinarians and a one month course for vaccinators. MCI recently hired seven new paraveterinarians who completed the EIL training in October. For a more complete discussion regarding these men, please refer to the section on New Paraveterinarians. EIL has no intention to develop a village-based veterinary program that is equivalent to the PVT program at MCI. At the same, however, the program director indicated that EIL wants to pursue a veterinary program at a discreet location where the veterinary component would be integrated with other programs.

The meeting with Jan Karpowicz, Andrew Juliani, and Dr. Popal covered several points of cooperation between EIL and MCI. Dr. Karpowicz is the Program Director for EIL. Juliani is the Director of Training, and Dr. Popal is the veterinarian responsible for the veterinary courses. EIL lamented the absence of any feedback regarding their training programs. They were interested in both the suitability of the material that they taught and the practical performance of their trainees in the field. MCI has not sent the EIL-trained paravets into the field yet so the assessment of their performance in the field is impossible to make at this time.

EIL takes an ambitious approach as far as the course content is concerned. The course is comprehensive approach, as if the course director is trying to squeeze four years of veterinary training into five months. After seeing the course outlines for GAF and DCA, I would say that EIL's program falls into line with the standard paraveterinary program available for Afghans. As with the programs at Peshawar, EIL did not have a detailed course syllabus in English. They were pleased to distribute their course outline, however. This outline has very few details. Nevertheless, EIL did solicit suggestions for modifications to its current curriculum.

The discussion also pursued the possibility of further

cooperation between MCI and EIL in several other ways. First, there is ample room for the integration of the training programs that EIL and MCI offer. These programs are more complementary rather than competitive and should be pursued in this spirit. Second, there is an opportunity for MCI to use the training resources at EIL. In one instance, the training facilities that EIL maintains at the refugee camp outside of Quetta could be a logical place for the trainers to review their technical skills with animals. EIL also expressed an interest in having the MCI trainers conduct a course for some of their extension staff. Finally, EIL inquired about the possibility of openings for staff who specialize in education rather than specifically in veterinary medicine.

ASSESSMENT: The meeting at EIL was held in a very cooperative spirit where many possibilities of mutual assistance were explored. Considering the absence of veterinary tradition in Quetta, this cooperative mood should be encouraged at every step. EIL has a great deal to offer to MCI including possible training facilities, students for the trainers to instruct, teaching resources that could be valuable for both stages of the MCI program. Furthermore, EIL has expressed the desire for more feedback from the veterinary programs which employ graduates from their training program. They are interested in any recommendations regarding their curriculum.

OTHER NGO's

There are several other NGO's in Pakistan with veterinary programs. Among these groups are MADERA, SCA, PRB, and CRRRA. Please refer to the synopsis of the activities of these organizations in the directory of NGO's with veterinary programs that accompanies this report.

TRAINING TRAINERS
OF
PRIVATE VETERINARY TECHNICIANS (PVT)

Draft Curricular Outline

November 1991

I. Introduction

The training program for which this curriculum is not an isolated activity, but a part of the requirements for establishing a sustainable veterinary system for rural Afghanistan. It is an attempt to start at the most basic level, with producer participation, and build as community understanding and support are forthcoming. While the training will produce the necessary manpower, we do not underestimate the importance of a system for commodity procurement and distribution down to the level of the PVT. The end result of this activity will be least-cost animal health delivery at the local level, supported by a network for commodity trade. It is anticipated that both service and commodities will be supported by the private sector. Although training of trainers of PVT in the foreseeable future is expected to remain subsidized or transferred to the Afghan public domain, every effort will be made to obtain local financing or in-kind support for the field training and continuing education of PVT.

The following principles apply to this training program:

- 1) It will consist of a seminar and field work program (rather than lectures) of approximately 4 to 5 weeks for previously trained Afghan paraveterinarians who will learn to become trainers of PVT.
- 2) The course will be given in Quetta to 6 qualified paraveterinarians who will be newly recruited or transferred from other MCI staff assignments. [Peter: do you want to add some qualifying criteria?]
- 3) The first half of the course will be devoted to a review of technical subject matter and training the paraveterinarians in pedagogy.
- 4) By and large, paraveterinarians already have sufficient technical knowledge. They need to learn how to transfer that knowledge.
- 5) The second half of the course will be devoted to practice teaching by the paraveterinary students. The practice teaching

sessions will use the same facilities that were available for the first part of the course.

6) In the review of technical matter, special emphasis will be placed on harmonizing the producers' knowledge of disease concepts with scientific medical knowledge.

7) The pedagogical instruction will concentrate on teaching techniques that are applicable to hands-on field instruction within Afghanistan.

8) Animals for instruction will belong to local producers in Pakistan, koochi crossing the border, or refugees. Free vaccination and health care will be the quid pro quo for teaching access. If suitable arrangements cannot be made, the project will purchase demonstration animals.

9) After graduation, paraveterinarians will be sent to Afghanistan to train the first group of PVT. After the first training foray, they will reassemble at MCI for detailed discussions and modification of the PVT training based on their experience.

10) An iterative mode will be established, where paraveterinary trainers receive regular refresher training which is passed along to PVT in retraining sessions in Afghanistan.

II. Curriculum Outline

A. Structure and function of the future animal health delivery system.

1) Role of paraveterinarians

- as trainers of PVT
- what do PVT do?
- reduced veterinary intervention role for paraveterinarians
- organizers of input distribution
- interaction with merchants and distributors
- performance incentives
- the anticipated training plan for paraveterinarians

2) Role of PVT

- community-based animal health care

- end-user of commodity distribution
- for-profit and private sector implications, incentives
- complementary roles of PVT and paraveterinarians
- future roles for PVT and paraveterinarians

3) Systems of production and recruitment of PVT

- sedentary, sedentary maldar and koochi systems
- geography of Afghanistan and patterns of land use; implications for logistics of training, restocking and monitoring
- animal husbandry practices and objectives of producers
- indigenous animal health concepts
- environmental contributions to disease processes
- implications of production systems for health delivery
- PVT selection criteria: current occupation, availability, freedom from constraining political ties, etc.
- how to accomodate illiteracy
- client relations

B. Technical parameters and record keeping

1) Diseases of sheep, goats, camels and cattle, and relevant husbandry practices

- review of anthrax, pleuropneumonia, enterotoxaemia, sarcoptic mange, wounds, pneumonias, abscesses, foot care, castration, surra, diarrheal diseases, GI parasites, FMD, lungworms, liver flukes, poxviruses, skin necrosis of camels
- indigenous knowledge related to the above diseases
- principles of prevention and least-cost treatments applied

to each disease, economics of animal health care

- pedagogical methods applicable to each disease:

discussion, demonstration, flip charts, pictograms, etc.

2) Recording and monitoring

- field trip report writing by paraveterinarians; venues;

recruitment information; collation of data from PVT;

financial accounting; inventory and procurement; performance evaluation

- monitoring of PVT; pictographic record keeping;

financial accounting; intervention records; client sources of data; rapid spot-check among producers; performance evaluation

- impact monitoring; uses of PVT data on disease prevalence and interventions; herd census and survey methodologies; differential vs. categoric diagnosis; serological monitoring and specimen collection

- uses of information; modification of paraveterinarian training program; modification of interventions; trouble shooting and modification of PVT recruitment and training; performance evaluation

3) Forward planning and setting of priorities

- anticipation of problems in the field and their resolution

- triage of interventions

- increasing participation by the private sector, especially in commodity distribution

- review of operational objectives in animal health and productivity, and health care system objectives

- review of incentives for PVT vis-a-vis their ultimate scope of work (occasional, part-time, or full-time function)

C. Practice teaching

At the end of the course, several days will be devoted to an instructor-supervised role acting session of PVT training by paraveterinarians, followed by a self-assessment of the session and discussion on ways to improve performance.

D. Work scheduling

- Instructor and paraveterinary students will draw up a work plan for the first round of training in Afghanistan with timetables, recruitment goals, geographic goals and plans for the next training session. Paraveterinarians will complete a course evaluation.

ANNEX B

TRAINING SESSIONS

The following list is a brief sketch of some of the material that should be included in the training sessions for the Trainers of the PVT's and for the PVT's.

1. Physical examination of animals.
2. Taking temperatures, pulse, and respiration rates.
3. Recognition and identification of more common illnesses.
4. Prevention and treatment of more common illnesses.
5. Vaccines and vaccinations.
6. Procedures for and sites for vaccinations and injections.
7. Giving medications by pills, drenches, injection, and topically.
8. Uses of different medicines for internal and external parasites.
9. Animal restraint.
10. Care of animal's feet.
11. Basic nutrition and diet.
12. Basic sanitation and hygiene.
13. Care of mother and young after birth.
14. Minor surgery - castration, tail docking, dehorning, first aid.
15. Poultry diseases.
16. Disposal of dead and infected animals.

VACCINES AND VACCINATION PROGRAMME
RECOMMENDATIONS FOR S.W. AFGHANISTAN

VACCINE	SPECIES	STORAGE	VACCINATION SEASONS	DOSE CHECK LABEL	COLOUR CODE	DURATION IMMUNITY	REMARKS
ANTHRAX Modified live spore	C, S & G	Room temp +4°C	Aug/Sept/Oct (any time)	C= 1ml s/c S&G=0.5ml	Mauve/ Purple	1 Year	Beware abortion pregnant dams
BLACKQUARTER Modified live spore	C & B	Room temp +4°C	Apr/May/June	5ml s/c Check label	Blue	1 Year	Only animals less than 3 years of age
ENTEROTOXAEMIA Triplevalent toxoid (types B, C & D)	S & G only	Room temp +4°C	Pregnant: Oct/Nov & & 4-6 wks before parturition (Jan/Feb) Lambs: 2-3 months	1 ml twice 3-4 wks apart	Orange	6 months	Beware abortion late pregnancy. see additional notes.
CONTAGIOUS AGALACTIA Live attenuated Mycoplasma	S & G only	+4°C only	Nov/Dec/Jan	Check label		6 months	Give 2 doses 2-3 weeks apart
CONTAGIOUS CAPRINE PLEUROPNEUMONIA	G only	+4°C only	Nov/Dec/Jan	Check label	Green	6 months	
SHEEP & GOAT POX Attenuated sheep pox virus	G only	+4°C only	Nov/Dec/Jan	1 ml s/c		1 Year	Only if outbreaks known to occur
FOOT & MOUTH DISEASE Multivalent live attenuated	C, B S & G	+4°C only v. fragile	In response to confirmed outbreaks	C&B 5ml s/c S&G 2-3ml s/c		6 months	Must confirm strain
NEWCASTLE DISEASE Modified live virus Hitchener B1 strain La Sota strain	Poultry	-20°C to +4°C only	Chicks: 2-3 days 1 drop Hitchener intracocular: Repeat at 3 wks. 60 days, La Sota in drinking water. Adults: La Sota in d/w	See label for dilution instructions		6 months	Efficiency in field very doubtful

SPECIES: C = Cattle, B = Buffalo, S = Sheep, G = Goat.

STORAGE: * Ideally refrigeration at +4°C, otherwise store in a COOL, DRY and DARK place

ALWAYS CHECK EXPIRY DATE ON VACCINE BOTTLE

ANTHRAX - SPLENIC FEVER

CAUSE:

Anthrax is caused by a very contagious bacteria which affects all domestic animals, wild animals, and humans. Animals with four stomachs (ruminants) are affected the most. The Disease can spread by insect bites (flies) or by eating, drinking, or breathing infected dust.

SYMPTOMS IN CATTLE, SHEEP, GOATS

1. Three types of bacteria cause quick death to long, slow sickness. Some animals show no signs of sickness and then die suddenly.
2. The sick animal may have a high fever, up to 43 C
3. Staggers and can not breathe.
4. Eyes bloodshot, nose red.
5. Body wet with sweat.
6. Ears, feet, and horns are cold.
7. Possible swelling around neck and chest.
8. Animal becomes unconscious and dies
9. Dark, bloody liquid may leak out of the nose or rectum of the dead animal.

DO NOT CUT INTO THIS ANIMAL. THE ENTIRE BODY AND BLOOD IS INFECTED AND CAUSES THE DISEASE TO SPREAD. THE ENTIRE VILLAGE MAY BECOME INFECTED

SYMPTOMS IN HORSES

1. High fever at 41 C.
2. Chills and weakness.
3. Bloody diarrhea.
4. Pain in belly (colic).
5. Swelling of head, neck, and chest.

6. Difficulty breathing and walking.
7. Convulsions and death.

PREVENTION

1. Vaccines are available and must be used in infected areas.
2. Dead animals, animal manure, bedding (straw) should be burned and buried in a deep pit. (Do not leave bodies for animals to eat, as they will spread the disease.) Cover burial area with a 10% solution chlorinated lime (bleaching powder if possible).
3. Do not dump bodies in rivers or streams.
4. Do not cut into animal.
5. Notify all veterinary and health people in your area.
6. Use insect sprays to keep insects from spreading the disease.

TREATMENT

For animals that have been exposed but are showing mild to no symptoms, antibiotics can be helpful.

1. Penicillin G - 50,000 units/Kg./daily in the muscle (I.M.)

OR

2. Oxytetracycline - 5 mgm/Kg./daily I.M.

OR

3. Chloramphenicol - 10 mgm/Kg./daily I.M.

Because this disease can infect people, special care is needed handling dead animals and infected material.

Burn and bury all diseased matter. Wash hands well with soap.

BLACKLEG AND MALIGNANT EDEMA

CAUSE

Both diseases are caused by bacteria that grow without oxygen and are very contagious. Malignant edema starts in an infected wound. Blackleg bacteria enter the body when it is eaten with food. These bacteria produce poisons that can cause losses in all livestock and humans.

SYMPTOMS

1. Lameness, difficulty walking.
2. Painful hot swelling over muscles which later become cold and painless.
3. Animal is depressed. It will not move or eat.
4. Death may come quickly in 1 or 2 days.
5. After the animal dies, gas or fluid may be felt under the skin.
6. Blackleg is usually in the upper part of the legs, but it can be in other parts of the body too.
7. Malignant edema can occur anywhere in the body, but it starts at a wound or puncture.

PREVENTION

1. Vaccination of cattle before 6 months of age.
2. Vaccination of pregnant sheep one month before lambing to protect lambs from problems after castration or tail docking.
3. Burn and bury dead animals.

TREATMENT

Death comes too fast for animals with symptoms. Penicillin in

large doses can be tried on all the animals that are exposed and have no symptoms.

1. Penicillin - 44,000 units/Kg. given in the muscle daily

OR

2. Oxytetracycline - 10 mgm/Kg. given in the muscle daily or until animals stop dying.

ENTEROTOXEMIA

CAUSE

The bacteria that causes this disease produces a deadly poison. This disease affects sheep, goats and sometimes cattle. Young animals are affected most often.

SYMPTOMS

1. Foul smelling darrhea with blood.
2. Animals are unsteady on their feet. The head sometimes twists backward.
3. Muscle twitching (tremors).
4. Teeth grinding and drooling from the mouth.
5. Sudden death in young animals.
6. Goats have a loss of appetite, dullness, bloody diarrhea and convulsions.

PREVENTION

An effective vaccine is available for use in problem areas.

TREATMENT

1. Usually not helpful because disease and death are so fast. Animals with nervous symptoms will die anyway.
2. Treat symptoms like diarrhea with forced fluids.
3. A specific immune antiserum can be used if available.

HEMORRHAGIC SEPTICEMIA

CAUSE

This disease is caused by a very contagious bacteria. Hemorrhagic septicemia affects cattle, buffalo, sheep, goats, horses, and donkeys, especially in tropical climates.

SYMPTOMS

1. High fever of 42 C with nasal discharge.
2. Loss of appetite and muscle twitching.
3. Ears droop and the whites of the eyes are red.
4. There may be swelling under the jaw, neck, and tongue.
5. The animal may cough, breath faster than normal, and have difficulty breathing.
6. The animal may have difficulty walking or be unable to move.
7. Constipation (hard manure), followed by bloody diarrhea.

PREVENTION

1. Vaccination every 6 months can control this disease.
2. Do not stress animals by shipping unless they have been vaccinated 10 days before.
3. Vaccinate before castration or any procedures that stress the animal.

TREATMENT

1. Penicillin with Streptomycin (COMBIOTIC), 25 mgm/Kg./daily given in the muscle for 3 or 4 days

OR

2. Oxytetracycline, 10 mgm/Kg./daily in the muscle for 3 or 4 days

OR

3. Sulfamethazine, 200 mgm/Kg./daily given in the vein (I.V.) or intraperitoneally (I.P.) into the right flank.

LIVER FLUKES

CAUSE

The liver fluke is a flat worm that prefers wet, tropical areas where snails live. The worm passes from the animal to the snail and the back to the animal again. Liver flukes usually infect ruminants but can infect people too.

SYMPTOMS

1. Sometimes there are NO symptoms.
2. Animal may have an enlarged, painful abdomen.
3. May be weak, or lose weight because it does not want to eat.
4. The mouth, tongue, eyelids, and nose may be pale because of anemia (loss of blood).
5. Animal does not grow properly.
6. The jaw may look swollen because of fluid under the skin.
7. The liver fluke cause hemorrhages in the liver or abdomen which can cause death.
8. Eggs from the fluke can be seen in microscopic examinations of infected manure. It may be necessary to check the manure for 3 or 4 days because the flukes do not lay eggs all the time.

PREVENTION

1. Reduce the snail population by improving land drainage.
2. Treat animals twice a year for flukes.

TREATMENT

Many medicines are used to treat animals for flukes. The most common medicine that is easy to buy is Bilevon, which is injected under the skin.

NEWCASTLE'S DISEASE (POULTRY)

CAUSE

Newcastle's Disease is caused by a very contagious virus.

SYMPTOMS

1. Fast drop in egg production
2. Hens may lay soft-shelled eggs.
3. Loss of appetite, dullness, and later paralysis
4. Birds keep their beaks wide open and grasp for breath
5. Mucous discharge from nostrils.
6. Foul smelling yellow diarrhea.
7. Nervous twitching of head and neck.

PREVENTION

Vaccine is available and is given in different ways.

1. Eye drop given at all ages.
2. Beak drip is suitable for day-old chicks only.
3. Spraying for day-old chicks only.
4. In drinking water for 3 day old chicks and older.
5. Injection into muscle.

TREATMENT

None

To prevent spreading of disease, dead birds should be burned and buried or buried after spreading with quick lime. DO NOT throw dead birds in rivers or streams.

Sick birds can be killed and eaten if cooked well.

SARCOPTIC MANGE, SCABIES

CAUSE

Mites are small insect-like parasites that affect cattle, dogs, and people

SYMPTOMS

1. Severe itching. Animals continuously rub on buildings, trees, fences, rocks, etc.
2. Some animals lose weight because they scratch themselves instead of eating and drinking.
3. The skin gets reddened, thickened, and covered with a gray crust.

PREVENTION

Keep infected animals penned and away from other animals. Scabies spreads quickly from one animal to another, to other livestock, and to people.

TREATMENT

Use ONE of the following. All of these medicines are POISONS. Keep away from children and animals. Do NOT pour these poisons into rivers, streams, or wells.

1. 0.1% Lindane. Brush scabs off pigs, and spray with Lindane solution. Repeat process in 7 days if necessary.
2. 0.25% Chlordane solution. Use the same procedure used for Lindane. If no spray is available, brush scabs off animal and use a sponge to apply the solution. Repeat in 7 to 10 days if necessary.
3. 0.05% Malathione solution. Spray on animal. Repeat in 7 to 10 days if necessary.